

## CLAIMS

1. A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

- regularly estimating (20-24, 27) if a criterion is met as to whether said

5 power control algorithm should better be de-activated,

- de-activating (28) said power control algorithm if said criterion is met.

Sub E17 2. A method according to claim 1, wherein said de-activation includes performing said algorithm with a relatively higher repetition period.

3. A method according to claim 1, wherein said de-activation includes  
10 performing a different algorithm instead.

Sub E17 4. A method according to claim 3, wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms.

5. A method according to <sup>claim 1</sup> ~~any of claims 1 to 4~~, comprising:

15 - regularly estimating (20-24, 26, 27, 30) if a criterion is met as to whether said power control algorithm should better be de-activated, when activated, or activated, when de-activated,

- de-activating (28), or activating (31), said power control algorithm if the corresponding criterion is met.

20 6 A method according to <sup>claim 1</sup> ~~any of claims 1 to 5~~, wherein provision is made not to de-activate, or activate, said algorithm too frequently.

7. A method according to <sup>claim 1</sup> ~~any of claims 1 to 6~~, wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target  
25 transmission quality.

8. A method according to claim 7, wherein said estimation as to whether said criterion is met includes:

- an estimation (23) of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given  
30 time-interval on which said deviation value is estimated,

- an estimation (24) of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice (25) between activation and de-activation of said algorithm  
35 depending on which of said first and second deviation values is the lowest.

9. A method according to claim 7 or 8, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

10. A method according to claim 7 or 8, wherein said estimated transmission quality is represented by a received signal power.

11. A method according to <sup>claim 8</sup> ~~any of claims 7 to 10~~, wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

<sup>Sub E3</sup> 12. A method according to <sup>claim 1</sup> ~~any of claims 1 to 11~~, wherein said method is performed in the uplink transmission direction of said mobile radiocommunication system.

13. A method according to <sup>claim 1</sup> ~~any of claims 1 to 11~~, wherein said method is performed in the downlink transmission direction of said mobile radiocommunication system.

14. A method according to <sup>claim 1</sup> ~~any of claims 1 to 13~~, wherein said mobile radiocommunication system is of CDMA type.

15. A mobile radiocommunication network entity (40), comprising, for performing a method according to <sup>claim 1</sup> ~~any of claims 1 to 14~~, in the uplink transmission direction of a mobile radiocommunication system:

- means (41) for performing said method,
- means (42) for sending corresponding power control commands (C1) to a

mobile station (43).

16. A mobile station (43), comprising, for performing a method according to <sup>claim 1</sup> ~~any of claims 1 to 14~~, in the uplink transmission direction of a mobile radiocommunication system:

- means (44) for receiving power control commands (C1) from a mobile

radiocommunication network entity (40), according to said method.

17. A mobile station (45), comprising, for performing a method according to <sup>claim 1</sup> ~~any of claims 1 to 14~~, in the downlink transmission direction of a mobile radiocommunication system:

- means (46) for performing said method,
- means (47) for sending corresponding power control commands (C2) to a

mobile radiocommunication network entity (48).

18. A mobile radiocommunication network entity (48), comprising, for performing a method according to <sup>claim 1</sup> ~~any of claims 1 to 14~~, in the downlink transmission direction of a mobile radiocommunication system:

- means (49) for receiving power control commands (C2) from a mobile station, according to said method.

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102416/MW/RCD Add D1  
add E5  
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